Chhattisgarh State Electricity Regulatory Commission
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CSERC
छत्तीसगढ़ राज्य
विद्युत नियामक आयोग

Suo-Motu Petition No. 59 of 2026

In the matter of-

Determination of generic tariff for Renewable Energy Sources based plants for FY 2026-27 under Regulation 9.1 of the Chhattisgarh State Electricity Regulatory Commission (Terms and conditions for determination of tariff for Renewable Energy sources) Regulations, 2025

Present : Vivek Ganodwale, Member (Law)
: Ajay Kumar Singh, Member (Tech)

ORDER

(July 03, 2026)

Regulation 9.1 of Chhattisgarh State Electricity Regulatory Commission (Terms and conditions for determination of tariff for Renewable Energy sources) Regulations, 2025, (hereinafter referred to as "the RE Tariff Regulations 2025") mandates the Commission to determine the generic tariff on the basis of the Suo-motu petition, for the following renewable energy technologies (RE technologies) in accordance to the norms as specified under the RE Tariff Regulations 2025;

(a) Small Hydro Projects;
(b) Non-fossil fuel-based co-generation Plants;
(c) Solar PV power project for 0.5 MW to 2 MW capacity; and

(d) Biogas based power project.

2. Generic tariff of the RE projects achieving COD during the second year of control period (i.e., FY 2026-27) has been determined through this order. Details of the tariff are enclosed herewith this Order.

3. The draft order was uploaded on the Commission's website on 13.05.2026 for inviting comments/suggestion/ objections from the stakeholders. The Commission, also invited comments from the various stakeholders vide public notice dated 14.05.2026. A copy of Order was also served to distribution licensees in the State, CSPGCL, State Govt in Energy Dept., Chhattisgarh State Renewable Energy Development Agency (CREDA), Chhattisgarh State Small Hydro Power Developers Associations and Members of the State Advisory Committee.

4. Hearing was held on 09.06.2026 at 11:30 AM in the Commission's office. Summary of views/comments/suggestions of the stakeholders, their analysis and Commission's views are given in the subsequent paragraphs.

5. M/s Venika Green Power Pvt. Ltd., M/s Lanjith Hydro Projects Pvt. Ltd., M/s Water 2 Wire Resources Pvt. Ltd. and M/s Chikini Hydro Projects Pvt. Ltd. have submitted comments on draft order. Pointwise comments/suggestion are as follows:

1. **Revision of capital Cost for Small Hydro Projects:** They have requested to revise the capital cost of Small Hydro Projects (5 MW to 25 MW) for FY 2026-27 as equipment cost increase due to hike in copper/ metal price due to fluctuations in the Dollar price.

2. **Revision in O&M expenses:** As regards O&M expenses, they have submitted that increase in price of fuel, labour and associated cost will impact the O&M cost. Therefore, they have requested to consider the uniform O&M expenses for 5 MW to 25 MW hydro projects i.e., Rs. 37.27 lakh per MW unlike 5 MW to 10 MW and 10 MW to 25 MW as specified in RE Regulation, 2025.

3. **Higher Return on Equity:** They have requested to increase the RoE to attract investors in the State. It is suggested to have minimum of 16% RoE for hydro projects.

Commission's view:

This order is being issued as per provisions and parameters specified in RE Tariff Regulations 2025. Parameters related to capital cost, O&M expenses and RoE have been specified in the RE Tariff Regulations 2025 after stakeholders' consultations. Review of these parameters, which are specified in the prevailing regulations are not the subject matter of present regulatory process.

6. CSPDCL has submitted followings to consider in finalising this order:

1. **Capital Cost:** As regards Capital cost, CSPDCL have submitted that amount of subsidy received by the projects should not be allowed to be capitalised and to be adjusted with normative capital cost allowed in Regulations.

2. **Typographical error** in parameters for interest on working capital.

3. **Plant Load Factor (PLF):** CSPDCL has submitted to consider the PLF for non- fossil fuel-based co-generation projects as 53% in line with Regulations of the Central Commission for tariff calculation purpose.

Commission’s view:

For considering subsidy in Capital cost, the Commission has determined the Generic tariff in this order. Any subsidy received by the projects will be account while determining project specific tariff. Further, typo error identified by the CSPDCL has been corrected. As regards PLF, this parameter is specified in RE Tariff Regulations, 2025 after due deliberations and reviewing this parameter is not a matter of present proceeding.

7. Based on the parameters specified in RE Tariff Regulations, 2025 and considering the deliberations mentioned in the preceding paragraphs, generic tariff for FY 2026-27 for RE plants have been determined. Details of tariff schedule is enclosed herewith.

Suo-motu P No 59 of 2026

Generic levelised generation tariff for various renewable energy technologies, for FY 2026-27

1. The generic generation tariff for various renewable energy technologies are discussed below:

1.1 **Useful Life:** Regulation 2.1(pp) of the RE Tariff Regulations 2025 defines 'useful life' in relation to a unit of a generating station as per following from the date of commercial operation (COD) of such generation facility:

Renewable Energy Projects	Years
Small Hydro Plant	40
Non-fossil fuel-based co-generation Plants	25
Solar PV power projects	25
Biogas based power projects	25

1.2 **Tariff Period:** As per Regulation 6 of RE Tariff Regulations 2025, the tariff period, in respect of the RE projects, shall be considered from the COD of the renewable energy generating stations and shall be considered as useful life of the RE Projects.

1.3 **Tariff Structure:** As per Regulation 10.1 of the RE Tariff Regulations 2025, the tariff for RE projects shall be single part tariff consisting of the following fixed cost components:
(a) Return on equity;

(b) Interest on loan capital;

(c) Depreciation;

(d) Interest on working capital;

(e) Operation and maintenance expenses.

For renewable energy technologies having fuel cost component, like Biogas based power projects, non-fossil fuel based co-generation projects, single-part tariff with two components, viz., fixed cost component and fuel cost component, shall be determined.

1.4 **Tariff Design:** As per para 11.1 in RE Tariff Regulations 2025, the generic tariff shall be determined on levelised basis for the Tariff Period from COD and levelisation of tariff is considered for useful life of the project.

2. Parameters for tariff determination

2.1 **Capital Cost:** Regulation 13 of the RE Tariff Regulations 2025 stipulates that the norms for the capital cost as specified in the technology specific chapter shall be inclusive of all capital works like plant and machinery, civil works, erection and commissioning, financing and interest during construction, preliminary and pre-operative expenses and evacuation infrastructure up to inter-connection point.

The Commission has specified the normative capital cost for control period i.e., FY 2025-26 for various RE technologies viz Small Hydro Power, Non-Fossil Fuel based Cogeneration, Solar PV Projects for 0.5 MW to 2 MW capacity and Biogas based power project. Technology specific capital cost of RE projects is discussed herein under:

A. **Capital cost of Small Hydro Projects:**

Regulation 28.1 of the RE Tariff Regulation 2025, specifies normative capital cost for small hydro projects for FY 2025-26 as follows. Regulation 13.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2026-27 shall be as follows:

Project Size	Capital Cost (Rs. Lakh/MW)
Up to 5 MW	890.00
Above 5 MW to 25 MW	1027.00

B. **Capital Cost of Non-fossil fuel based Co-generation Projects:**

Regulation 34 of the RE Tariff Regulation 2025, specifies normative capital cost for non-fossil fuel based co-generations for FY 2025-26. Regulation 13.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2026-27 shall be Rs. 562 Lakh/MW.

C. **Capital Cost of Solar PV power project for 0.5 MW to 2 MW capacity:**

Regulation 42.1 of the RE Tariff Regulation 2025, specifies normative capital cost for Solar PV power project for 0.5 MW to 2 MW capacity for FY 2025-26.

Regulation 13.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2026-27 shall be Rs. 3.5 Crore/MW.

D. **Capital Cost of Biogas based power project:**

Regulation 56 of the RE Tariff Regulation 2025, specifies normative capital cost for Biogas based power project for FY 2025-26.

Regulation 13.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2026-27 shall be Rs. 1354 Lakh /MW.

2.2 **Debt-Equity Ratio:** Regulation 14.1 of the RE Tariff Regulations 2025 provides that the debt equity ratio of 70:30 is to be considered for determination of generic tariff based on Suo-motu petition.

2.3 **Loan and Finance Charges:** As per regulation 15 of the RE tariff Regulations 2025, for the purpose of determination of tariff, loan / debt tenure of 15 years shall be considered. The normative interest rate shall be considered as two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one year tenor) prevalent during the last available six months. Since, tariff will be applicable from 1st April of the respective years, State Bank of India MCLR, for period prior to six month from the 1st April has been considered. State Bank of India MCLR and average MCLR is shown below.

FY 2026-27	
Month	**One year tenor MCLR Rate, % (SBI)**
15th Mar 2026	8.7
15th Feb 2026	8.7
15th Jan 2026	8.7
15th Dec 2025	8.7
15th Nov 2025	8.75
15th Oct 2025	8.75
Average	**8.72**

In terms of the above, the computations of interest on loan comes out as 10.72% for FY 2026-27.

2.4 **Depreciation:** As specified in regulation 16 of the RE tariff Regulations 2025, value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset. The depreciation rate for the first 15 years of the Tariff Period shall be 4.67% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 16th year onwards on 'Straight Line Method'.

2.5 **Return on Equity:** Regulation 17.1 of the RE Tariff Regulations 2025 provides that the value base for the equity shall be 30% of the capital cost for generic tariff determination. Further regulation 17.2 stipulates the normative return on equity 14% for renewable energy projects other than small hydro projects and 15% for small hydro projects, to be grossed up by prevailing MAT rate for first 20 years. MAT rate, as on 1st April 2026, (for companies having profit above Rs. 10 Cr) is 16.307%.

ROE for the remaining tariff period shall be grossed up by the latest available notified Corporate Tax rate.

2.6 **Interest on Working Capital:** As per regulation 18 of the RE tariff Regulations 2025, working capital requirement in respect of small hydro power, solar PV power projects shall be computed as per following:

I. Operation & Maintenance expenses for one month;

II. Receivables equivalent to 45 days of energy charges for sale of electricity calculated on the normative PLF or CUF;

III. Maintenance spare @ 15% of operation and maintenance expenses

The Working Capital requirement in respect of non-fossil fuel based co-generation projects power project and biogas based power project shall be computed as per following:

I. Fuel costs for four months equivalent to normative PLF;

II. Operation & Maintenance expense for one month;

III. Receivables equivalent to 45 days of fixed and variable charges for sale of electricity calculated on the target PLF;

IV. Maintenance spare @ 15% of operation and maintenance expenses

Interest on Working Capital shall be at interest rate equivalent to normative interest rate of three hundred twenty five (325) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff. Accordingly, interest rate comes out as 11.97% for FY 2026-27.

2.7 **Operation & Maintenance Expenses:** As per provisions in RE Tariff Regulations 2025, O&M expenses shall be determined for the Tariff Period based on normative O&M expenses specified by the Commission for first year of the Control Period and shall be escalated at the rate of 5.25% per annum over the Tariff Period.

A. **O& M Expenses for Small Hydro Projects:**

As per regulation 31.1 & 31.2 of the RE Tariff Regulation 2025, O&M expenses for small hydro projects for FY 2026-27 shall be as follows;

Project Size	O& M Expenses (Rs. Lakh/MW)
Up to 5 MW	43.93
Above 5 MW to 10 MW	37.27
Above 10 MW to 25 MW	31.82

B. **O & M Expenses for Non-fossil fuel based Cogeneration Projects:**

As per regulations 40.1 & 40.2 of the RE Tariff Regulations 2025, normative O & M expenses for the Non-fossil fuel based Cogeneration Projects for the year 2026-27 shall be Rs. 32.02 Lakh/MW.

C. **O& M Expenses for Solar PV power project:**

As per regulations 44.1 & 44.2 of the RE Tariff Regulations 2025, normative O & M expenses for Solar Photovoltaic Power Project shall be Rs. 9.75 Lakh/MW for FY 2026-27.

D. **O& M Expenses for Biogas based power project:**

As per regulations 59.1 & 59.2 of the RE Tariff Regulations 2025, normative O & M expenses for Biogas based power project shall be Rs. 80.03 Lakh/MW for FY 2026-27.

2.8 **Capacity Utilisation Factor (CUF):** Regulations 29.1 and 43 of the RE Tariff Regulations 2025 specify the norms for Capacity Utilization Factor (CUF) in respect of the Small Hydro and Solar PV based power generating stations as per the details given in the table below which has been considered for determination of tariff.

RE Projects	CUF
Small Hydro projects	30%
Solar PV	21%

2.9 **Plant Load Factor (PLF):** Regulations 35.2 and 57 of the RE Tariff Regulations 2025 specifies the plant load factor for Non fossil Fuel based Co-generation projects and Biogas based power project as given in the table below which has been considered for determination of fixed charges.

RE Projects	PLF
Non fossil Fuel based Co-generation projects	38%
Biogas based power projects	90%

2.10 **Auxiliary Power Consumption:** Regulations 30, 36, 45 and 58 of the RE Tariff Regulations 2025 stipulate the auxiliary power consumption as under which has been considered for determination of tariff of the RE projects.

RE Projects	Aux Cons
Small Hydro projects	1.0%
Non fossil Fuel based Co-generation projects	8.5%
Solar PV	0.25%
Biogas based power projects	12%

2.11 **Station Heat Rate:** The Station Heat Rates (SHR) specified under Regulations 37 of the RE Tariff Regulations 2025 for non-fossil fuel based co-generation projects is 3600 Kcal/kWh.

2.12 **Calorific Value:** In terms of Regulation 38 of the RE Tariff Regulations 2025 the calorific value of and bagasse for determination of tariff is 2250 Kcal/kg.

2.13 **Fuel Cost:** The Commission, in terms of Regulation 39 of the RE Regulations 2025, has specified the bagasse and feed stock price applicable during the period FY 2026-27 as Rs. 2914 and Rs.1822 per MT respectively. Further, as per regulations 39.3 and 61.1 these costs shall be escalated by 3.45% to arrive at price for subsequent years.

2.14 **Specific Fuel Consumption:** The Specific Fuel Consumption specified under Regulations 60 of the RE Tariff Regulations 2025 for biogas based power projects shall be 3 kg of substrate mix per kWh.

2.15 **Discount Factor:** The discount factor considered for the purpose of tariff levelisation is equal to the Post Tax weighted average cost of the capital on the basis of normative debt: equity ratio (70:30) specified in the RE Tariff Regulations 2025. Considering the normative debt equity ratio and weighted average of the post-tax rates for interest and equity component, the discount factor is calculated.
Interest Rate considered for the loan component of Capital Cost is 10.72%.

i) **Small Hydro Plants**: For equity component rate of Return on Equity (ROE) considered at Post Tax ROE of 15% considering the IT rate of 34.94%. The discount rate derived by this method for all RE technologies is 9.38%.

ii) **Solar PV, Co-generation Plants and Biogas power projects**: For equity component rate of Return on Equity (ROE) considered at Post Tax ROE of 14% considering the IT rate of

34.94%. The discount rate derived by this method for all RE technologies is 9.08%.

3. Generic Levelised Tariff FY 2026-27

In the light of the discussion made in the preceding paragraphs, the generic levelised tariffs of the following RE projects achieving COD during the financial year 2026-27 have been determined as under.

RE Projects	Levelised Fixed Charges, Rs/kWh
Small Hydro projects below 5 MW	7.68
Small Hydro projects 5 MW to 10 MW	7.87
Small Hydro projects 10 MW to 25 MW	7.47
Mini/Micro Hydro projects (upto 2 MW)	8.18
Non fossil Fuel based Co-generation projects– Fixed Charges	4.55
Solar PV projects 0.5 MW to 2 MW	3.40
Biogas based power projects – Fixed Charges	4.90

Variable cost (energy charge) for FY 2026-27:

RE Projects	Energy Charges, Rs/kWh
Non fossil fuel based co-generation projects	5.10
Biogas based power projects	6.21

The detailed computations for the generic tariff for various RE technologies have been enclosed to this Order as per the details given hereunder;

RE Projects	FY 2026-27
Small Hydro projects below 5 MW	Annexure: 1A
Small Hydro projects 5 MW to 10 MW	Annexure: 1B
Small Hydro projects 10 MW to 25 MW	Annexure: 1C
Mini/Micro Hydro projects (upto 2 MW)	Annexure: 1D
Non fossil Fuel based Co-generation projects	Annexure: 2
Solar PV projects 0.5 MW to 2 MW	Annexure: 3
Biogas based power projects	Annexure: 4

Above generic levelised tariff has been determined for the RE power projects (considering entire useful life and levelisation of tariff for the entire useful life), which are achieving COD during the FY 2026-27 having long term PPA for useful life with distribution companies in the State. Tariff period shall be considered as useful life of the project and shall be considered from the COD of the renewable energy generating stations.

We order accordingly.

Sd/-	**Sd/-**
Member (Tech.)	**Member (legal)**

Annexure: 1 A

Parameters for determination of tariff for Hydel plant up to 5 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost		Capital cost/MW	Rs Cr/MW	8.900
			Power Plant Cost	Rs. Cr	8.9
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.23
			Total equity amount	Rs Cr.	2.67
		Debt component	Loan amount	Rs Cr	6.23
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	2.67
			ROE for first 20 years	%	17.92%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.38%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.44
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%

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Determination of tariff for Hydel plant up to 5 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	43.93	46.24	48.67	51.22	53.91	56.74	59.72	62.85	66.15	69.63
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56
Interest on term loan	Rs Lakh	64.54	60.08	55.63	51.18	46.72	42.27	37.81	33.36	28.90	24.45
Interest on Working Capital	Rs Lakh	4.21	4.24	4.28	4.32	4.37	4.43	4.49	4.56	4.64	4.72
Return on Equity	Rs Lakh	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85
Total Fixed Cost	Rs Lakh	202.09	199.98	197.99	196.14	194.42	192.85	191.44	190.19	189.11	188.21
Tariff	Rs/kWh	7.77	7.69	7.61	7.54	7.47	7.41	7.36	7.31	7.27	7.23

O & M expenses	Rs/kWh	1.69	1.78	1.87	1.97	2.07	2.18	2.30	2.42	2.54	2.68
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Interest on term loan	Rs/kWh	2.48	2.31	2.14	1.97	1.80	1.62	1.45	1.28	1.11	0.94
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18
Return on Equity	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Total Tariff	**Rs/kWh**	**7.77**	**7.69**	**7.61**	**7.54**	**7.47**	**7.41**	**7.36**	**7.31**	**7.27**	**7.23**
Discount Factor		1	0.914	0.836	0.764	0.699	0.639	0.584	0.534	0.488	0.446
Levellised Tariff	Rs/kWh	**7.68**									

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	73.28	77.13	81.18	85.44	89.93	94.65	99.62	104.85	110.35	116.14
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	20.00	15.54	11.09	6.63	2.18	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.81	4.91	5.02	5.14	5.27	4.92	5.14	5.36	5.60	5.85
Return on Equity	Rs Lakh	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85
Total Fixed Cost	Rs Lakh	187.51	187.00	186.70	186.63	186.79	154.53	159.71	165.17	170.91	176.95
Tariff	Rs/kWh	7.21	7.19	7.18	7.17	7.18	5.94	6.14	6.35	6.57	6.80

O & M expenses	Rs/kWh	2.82	2.96	3.12	3.28	3.46	3.64	3.83	4.03	4.24	4.46
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.77	0.60	0.43	0.25	0.08	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.19	0.19	0.20	0.20	0.19	0.20	0.21	0.22	0.22
Return on Equity	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Total Tariff	**Rs/kWh**	**7.21**	**7.19**	**7.18**	**7.17**	**7.18**	**5.94**	**6.14**	**6.35**	**6.57**	**6.80**
Discount Factor		0.408	0.373	0.341	0.312	0.285	0.261	0.238	0.218	0.199	0.182
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	122.24	128.66	135.41	142.52	150.00	157.88	166.17	174.89	184.07	193.74
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	6.32	6.60	6.89	7.20	7.53	7.87	8.23	8.60	9.00	9.42
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	197.23	203.92	210.97	218.39	226.19	234.41	243.06	252.16	261.74	271.82
Tariff	Rs/kWh	7.58	7.84	8.11	8.39	8.69	9.01	9.34	9.69	10.06	10.45

O & M expenses	Rs/kWh	4.70	4.95	5.20	5.48	5.77	6.07	6.39	6.72	7.08	7.45
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	0.35	0.36
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**7.58**	**7.84**	**8.11**	**8.39**	**8.69**	**9.01**	**9.34**	**9.69**	**10.06**	**10.45**
Discount Factor		0.166	0.152	0.139	0.127	0.116	0.106	0.097	0.089	0.081	0.074
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	203.91	214.61	225.88	237.74	250.22	263.36	277.19	291.74	307.05	323.17
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	9.86	10.32	10.81	11.33	11.87	12.44	13.03	13.66	14.33	15.03
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	282.43	293.60	305.36	317.73	330.75	344.46	358.88	374.07	390.05	406.87
Tariff	Rs/kWh	10.86	11.28	11.74	12.21	12.71	13.24	13.79	14.38	14.99	15.64

O & M expenses	Rs/kWh	7.84	8.25	8.68	9.14	9.62	10.12	10.65	11.21	11.80	12.42
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**10.86**	**11.28**	**11.74**	**12.21**	**12.71**	**13.24**	**13.79**	**14.38**	**14.99**	**15.64**
Discount Factor		0.068	0.062	0.057	0.052	0.047	0.043	0.040	0.036	0.033	0.030
Levellised Tariff	Rs/kWh										

TBhutia.

Parameters for determination of tariff for Hydel plant above 5 MW upto 10 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	10.270
		Power Plant Cost		Rs. Cr	10.27
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	7.189
			Total equity amount	Rs Cr.	3.081
		Debt component	Loan amount	Rs Cr	7.189
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	3.081
			ROE for first 20 years	%	17.92%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.38%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.37
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%

Bhiston

Determination of tariff for Hydel plant 5 MW to 10 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	37.27	39.23	41.28	43.45	45.73	48.13	50.66	53.32	56.12	59.07
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96
Interest on term loan	Rs Lakh	74.47	69.33	64.19	59.05	53.91	48.77	43.63	38.49	33.35	28.21
Interest on Working Capital	Rs Lakh	4.27	4.28	4.29	4.31	4.33	4.36	4.39	4.43	4.48	4.53
Return on Equity	Rs Lakh	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22
Total Fixed Cost	Rs Lakh	219.20	216.02	212.95	210.00	207.16	204.45	201.87	199.43	197.13	194.99
Tariff	Rs/kWh	8.43	8.30	8.19	8.07	7.96	7.86	7.76	7.67	7.58	7.49

O & M expenses	Rs/kWh	1.43	1.51	1.59	1.67	1.76	1.85	1.95	2.05	2.16	2.27
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Interest on term loan	Rs/kWh	2.86	2.66	2.47	2.27	2.07	1.87	1.68	1.48	1.28	1.08
Interest on Working Capital	Rs/kWh	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Return on Equity	Rs/kWh	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
Tariff	Rs/kWh	8.43	8.30	8.19	8.07	7.96	7.86	7.76	7.67	7.58	7.49
Discount Factor		1	0.914	0.836	0.764	0.699	0.639	0.584	0.534	0.488	0.446
Levellised Tariff	Rs/kWh	**7.87**									

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	62.17	65.43	68.87	72.48	76.29	80.29	84.51	88.95	93.62	98.53
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	23.07	17.93	12.79	7.65	2.51	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.58	4.65	4.72	4.80	4.89	4.43	4.61	4.80	5.00	5.22
Return on Equity	Rs Lakh	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22
Total Fixed Cost	Rs Lakh	193.01	191.19	189.56	188.12	186.87	148.14	152.53	157.16	162.03	167.16
Tariff	Rs/kWh	7.42	7.35	7.29	7.23	7.18	5.69	5.86	6.04	6.23	6.43

O & M expenses	Rs/kWh	2.39	2.51	2.65	2.79	2.93	3.09	3.25	3.42	3.60	3.79
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.89	0.69	0.49	0.29	0.10	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.18	0.18	0.18	0.19	0.17	0.18	0.18	0.19	0.20
Return on Equity	Rs/kWh	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
Tariff	Rs/kWh	7.42	7.35	7.29	7.23	7.18	5.69	5.86	6.04	6.23	6.43
Discount Factor		0.408	0.373	0.341	0.312	0.285	0.261	0.238	0.218	0.199	0.182
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	103.70	109.15	114.88	120.91	127.26	133.94	140.97	148.37	156.16	164.36
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	5.68	5.91	6.16	6.42	6.70	6.99	7.29	7.61	7.95	8.31
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	188.62	194.30	200.27	206.57	213.19	220.16	227.50	235.22	243.34	251.90
Tariff	Rs/kWh	7.25	7.47	7.70	7.94	8.19	8.46	8.74	9.04	9.35	9.68

O & M expenses	Rs/kWh	3.99	4.20	4.42	4.65	4.89	5.15	5.42	5.70	6.00	6.32
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.32
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	Rs/kWh	7.25	7.47	7.70	7.94	8.19	8.46	8.74	9.04	9.35	9.68
Discount Factor		0.166	0.152	0.139	0.127	0.116	0.106	0.097	0.089	0.081	0.074
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	172.99	182.07	191.63	201.69	212.28	223.42	235.15	247.49	260.49	274.16
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	8.68	9.07	9.49	9.92	10.38	10.86	11.37	11.91	12.47	13.06
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	260.90	270.37	280.35	290.84	301.89	313.52	325.76	338.64	352.19	366.46
Tariff	Rs/kWh	10.03	10.39	10.78	11.18	11.60	12.05	12.52	13.02	13.54	14.09

O & M expenses	Rs/kWh	6.65	7.00	7.37	7.75	8.16	8.59	9.04	9.51	10.01	10.54
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.33	0.35	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	Rs/kWh	10.03	10.39	10.78	11.18	11.60	12.05	12.52	13.02	13.54	14.09
Discount Factor		0.068	0.062	0.057	0.052	0.047	0.043	0.040	0.036	0.033	0.030

Levellised Tariff Rs/kWh

Bhistora.

Parameters for determination of tariff for Hydel plant above 10 MW upto 25 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	10.270
		Power Plant Cost		Rs. Cr	10.27
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	7.189
			Total equity amount	Rs Cr.	3.081
		Debt component	Loan amount	Rs Cr	7.189
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	3.081
			ROE for first 20 years	%	17.92%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.38%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.32
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%

Determination of tariff for Hydel plant 10 MW to 25 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	31.82	33.49	35.25	37.10	39.04	41.09	43.25	45.52	47.91	50.43
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96	47.96
Interest on term loan	Rs Lakh	74.47	69.33	64.19	59.05	53.91	48.77	43.63	38.49	33.35	28.21
Interest on Working Capital	Rs Lakh	4.04	4.03	4.03	4.04	4.04	4.06	4.07	4.09	4.12	4.15
Return on Equity	Rs Lakh	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22
Total Fixed Cost	Rs Lakh	213.51	210.03	206.65	203.37	200.18	197.10	194.14	191.29	188.57	185.97

O & M expenses	Rs/kWh	1.22	1.29	1.35	1.43	1.50	1.58	1.66	1.75	1.84	1.94
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Interest on term loan	Rs/kWh	2.86	2.66	2.47	2.27	2.07	1.87	1.68	1.48	1.28	1.08
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Return on Equity	Rs/kWh	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
Tariff	**Rs/kWh**	**8.21**	**8.07**	**7.94**	**7.82**	**7.69**	**7.58**	**7.46**	**7.35**	**7.25**	**7.15**
Discount Factor		1	0.914	0.836	0.764	0.699	0.639	0.584	0.534	0.488	0.446
Levellised Tariff	Rs/kWh	**7.47**									

TSrinivas

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	53.07	55.86	58.79	61.88	65.13	68.55	72.15	75.93	79.92	84.12
Depreciation	Rs Lakh	47.96	47.96	47.96	47.96	47.96	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	23.07	17.93	12.79	7.65	2.51	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.19	4.23	4.28	4.34	4.40	3.92	4.07	4.24	4.41	4.59
Return on Equity	Rs Lakh	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22	55.22
Total Fixed Cost	Rs Lakh	183.52	181.21	179.05	177.05	175.23	135.88	139.64	143.59	147.75	152.12

O & M expenses	Rs/kWh	2.04	2.15	2.26	2.38	2.50	2.63	2.77	2.92	3.07	3.23
Depreciation	Rs/kWh	1.84	1.84	1.84	1.84	1.84	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.89	0.69	0.49	0.29	0.10	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.17	0.17	0.15	0.16	0.16	0.17	0.18
Return on Equity	Rs/kWh	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
Tariff	**Rs/kWh**	**7.05**	**6.96**	**6.88**	**6.81**	**6.74**	**5.22**	**5.37**	**5.52**	**5.68**	**5.85**
Discount Factor		0.408	0.373	0.341	0.312	0.285	0.261	0.238	0.218	0.199	0.182
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	88.53	93.18	98.07	103.22	108.64	114.34	120.35	126.67	133.32	140.31
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	5.02	5.22	5.43	5.66	5.89	6.14	6.40	6.67	6.96	7.26
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	172.79	177.64	182.74	188.11	193.77	199.72	205.98	212.57	219.51	226.81

O & M expenses	Rs/kWh	3.40	3.58	3.77	3.97	4.18	4.39	4.63	4.87	5.12	5.39
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	**Rs/kWh**	**6.64**	**6.83**	**7.02**	**7.23**	**7.45**	**7.68**	**7.92**	**8.17**	**8.44**	**8.72**
Discount Factor		0.166	0.152	0.139	0.127	0.116	0.106	0.097	0.089	0.081	0.074
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	147.68	155.43	163.59	172.18	181.22	190.74	200.75	211.29	222.38	234.06
Depreciation	Rs Lakh	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	7.58	7.92	8.27	8.64	9.04	9.45	9.88	10.34	10.82	11.32
Return on Equity	Rs Lakh	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04	71.04
Total Fixed Cost	Rs Lakh	234.50	242.59	251.10	260.06	269.49	279.42	289.87	300.86	312.44	324.62

O & M expenses	Rs/kWh	5.68	5.97	6.29	6.62	6.97	7.33	7.72	8.12	8.55	9.00
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.29	0.30	0.32	0.33	0.35	0.36	0.38	0.40	0.42	0.44
Return on Equity	Rs/kWh	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73
Tariff	**Rs/kWh**	**9.01**	**9.32**	**9.65**	**10.00**	**10.36**	**10.74**	**11.14**	**11.56**	**12.01**	**12.48**
Discount Factor		0.068	0.062	0.057	0.052	0.047	0.043	0.040	0.036	0.033	0.030
Levellised Tariff	Rs/kWh										

Parameters for determination of tariff for Hydel plant up to 2 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.0%
			Useful Life	Years	40
			Gross Generation	MU	2.63
			Auxiliary consumption	MU	0.03
			Net generation	MU	2.60
2	Project cost	Capital cost/MW		Rs Cr/MW	8.900
		Power Plant Cost		Rs. Cr	8.9
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.23
			Total equity amount	Rs Cr.	2.67
		Debt component	Loan amount	Rs Cr	6.23
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	2.67
			ROE for first 20 years	%	17.92%
			ROE for 21 year onwards	%	23.06%
			Discount Rate	%	9.38%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.44
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%

Determination of tariff for Hydel plant up to2 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	43.93	46.24	48.67	51.22	53.91	56.74	59.72	62.85	66.15	69.63
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56	41.56
Interest on term loan	Rs Lakh	64.54	60.08	55.63	51.18	46.72	42.27	37.81	33.36	28.90	24.45
Interest on Working Capital	Rs Lakh	4.21	4.24	4.28	4.32	4.37	4.43	4.49	4.56	4.64	4.72
Return on Equity	Rs Lakh	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85
Total Fixed Cost	Rs Lakh	202.09	199.98	197.99	196.14	194.42	192.85	191.44	190.19	189.11	188.21
Tariff	Rs/kWh	7.77	7.69	7.61	7.54	7.47	7.41	7.36	7.31	7.27	7.23

O & M expenses	Rs/kWh	1.69	1.78	1.87	1.97	2.07	2.18	2.30	2.42	2.54	2.68
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Interest on term loan	Rs/kWh	2.48	2.31	2.14	1.97	1.80	1.62	1.45	1.28	1.11	0.94
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18
Return on Equity	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Total Tariff	**Rs/kWh**	**7.77**	**7.69**	**7.61**	**7.54**	**7.47**	**7.41**	**7.36**	**7.31**	**7.27**	**7.23**
Discount Factor		1	0.914	0.836	0.764	0.699	0.639	0.584	0.534	0.488	0.446
Levellised Tariff	Rs/kWh	**8.18**									

Determination of tariff for Hydel plan

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	73.28	77.13	81.18	85.44	89.93	94.65	99.62	104.85	110.35	116.14
Depreciation	Rs Lakh	41.56	41.56	41.56	41.56	41.56	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	20.00	15.54	11.09	6.63	2.18	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.81	4.91	5.02	5.14	5.27	4.92	5.14	5.36	5.60	5.85
Return on Equity	Rs Lakh	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85	47.85
Total Fixed Cost	Rs Lakh	187.51	187.00	186.70	186.63	186.79	154.53	159.71	165.17	170.91	176.95
Tariff	Rs/kWh	7.21	7.19	7.18	7.17	7.18	5.94	6.14	6.35	6.57	6.80

O & M expenses	Rs/kWh	2.82	2.96	3.12	3.28	3.46	3.64	3.83	4.03	4.24	4.46
Depreciation	Rs/kWh	1.60	1.60	1.60	1.60	1.60	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.77	0.60	0.43	0.25	0.08	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.18	0.19	0.19	0.20	0.20	0.19	0.20	0.21	0.22	0.22
Return on Equity	Rs/kWh	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Total Tariff	**Rs/kWh**	**7.21**	**7.19**	**7.18**	**7.17**	**7.18**	**5.94**	**6.14**	**6.35**	**6.57**	**6.80**
Discount Factor		0.408	0.373	0.341	0.312	0.285	0.261	0.238	0.218	0.199	0.182
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	21	22	23	24	25	26	27	28	29	30
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	21	22	23	24	25	26	27	28	29	30
O & M expenses	Rs Lakh	122.24	128.66	135.41	142.52	150.00	157.88	166.17	174.89	184.07	193.74
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	6.32	6.60	6.89	7.20	7.53	7.87	8.23	8.60	9.00	9.42
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	197.23	203.92	210.97	218.39	226.19	234.41	243.06	252.16	261.74	271.82
Tariff	Rs/kWh	7.58	7.84	8.11	8.39	8.69	9.01	9.34	9.69	10.06	10.45

O & M expenses	Rs/kWh	4.70	4.95	5.20	5.48	5.77	6.07	6.39	6.72	7.08	7.45
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.33	0.35	0.36
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**7.58**	**7.84**	**8.11**	**8.39**	**8.69**	**9.01**	**9.34**	**9.69**	**10.06**	**10.45**
Discount Factor		0.166	0.152	0.139	0.127	0.116	0.106	0.097	0.089	0.081	0.074
Levellised Tariff	Rs/kWh										

Determination of tariff for Hydel plan

Particulars	Year	31	32	33	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Fixed Cost	Year	31	32	33	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	203.91	214.61	225.88	237.74	250.22	263.36	277.19	291.74	307.05	323.17
Depreciation	Rs Lakh	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	9.86	10.32	10.81	11.33	11.87	12.44	13.03	13.66	14.33	15.03
Return on Equity	Rs Lakh	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56	61.56
Total Fixed Cost	Rs Lakh	282.43	293.60	305.36	317.73	330.75	344.46	358.88	374.07	390.05	406.87
Tariff	Rs/kWh	10.86	11.28	11.74	12.21	12.71	13.24	13.79	14.38	14.99	15.64

O & M expenses	Rs/kWh	7.84	8.25	8.68	9.14	9.62	10.12	10.65	11.21	11.80	12.42
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.53	0.55	0.58
Return on Equity	Rs/kWh	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Total Tariff	**Rs/kWh**	**10.86**	**11.28**	**11.74**	**12.21**	**12.71**	**13.24**	**13.79**	**14.38**	**14.99**	**15.64**
Discount Factor		0.068	0.062	0.057	0.052	0.047	0.043	0.040	0.036	0.033	0.030
Levellised Tariff	Rs/kWh										

Parameters for determination of tariff for Co- generation Plant					
S No	Assumption Head	Sub-head	Sub-head 2	Unit	Value
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	38%
			Auxiliary consumption	%	8.5%
			Useful Life	Years	25
			Gross Generation	MU	3.33
			Auxiliary consumption	MU	0.28
			Net generation	MU	3.05
2	Project cost	Capital cost/MW		Rs Cr/MW	5.620
		Power Plant Cost		Rs. Cr	5.62
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	3.934
			Total equity amount	Rs Cr.	1.686
		Debt component	Loan amount	Rs Cr	3.934
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	1.686
			ROE for first 20 years	%	16.73%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.08%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.32
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	Fuel cost	Month	1
			O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%
6	Fuel related assumptions		Heat rate	KCal/kWh	3600
			Calorific value of bagasse	KCal/kg	2250
			Base price of bagasse	Rs/MT	2914
			bagasse price escalation factor	%	3.45%

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Determination of tariff for Co-Generation plant

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	32.02	33.70	35.47	37.33	39.29	41.35	43.52	45.81	48.21	50.74
Depreciation	Rs Lakh	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25	26.25
Interest on term loan	Rs Lakh	40.75	37.94	35.13	32.32	29.50	26.69	23.88	21.06	18.25	15.44
Interest on Working Capital	Rs Lakh	11.42	11.75	12.09	12.45	12.82	13.21	13.61	14.03	14.47	14.93
Return on Equity	Rs Lakh	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
Total Fixed Cost	Rs Lakh	138.64	137.84	137.13	136.54	136.06	135.70	135.46	135.35	135.38	135.56
Tariff	Rs/kWh	4.55	4.53	4.50	4.48	4.47	4.46	4.45	4.44	4.44	4.45

O & M expenses	Rs/kWh	1.05	1.11	1.16	1.23	1.29	1.36	1.43	1.50	1.58	1.67
Depreciation	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Interest on term loan	Rs/kWh	1.34	1.25	1.15	1.06	0.97	0.88	0.78	0.69	0.60	0.51
Interest on Working Capital	Rs/kWh	0.37	0.39	0.40	0.41	0.42	0.43	0.45	0.46	0.48	0.49
Return on Equity	Rs/kWh	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Tariff	**Rs/kWh**	**4.55**	**4.53**	**4.50**	**4.48**	**4.47**	**4.46**	**4.45**	**4.44**	**4.44**	**4.45**
Variable CoG	Rs/kWh	5.10	5.27	5.45	5.64	5.84	6.04	6.25	6.46	6.68	6.91
Discount Factor		1	0.917	0.840	0.770	0.706	0.648	0.594	0.544	0.499	0.457
Levellised Tariff	Rs/kWh	**4.55**									

Determination of tariff for Co-Genera

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	53.41	56.21	59.16	62.27	65.54	68.98	72.60	76.41	80.42	84.64
Depreciation	Rs Lakh	26.25	26.25	26.25	26.25	26.25	11.21	11.21	11.21	11.21	11.21
Interest on term loan	Rs Lakh	12.63	9.81	7.00	4.19	1.38	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	15.40	15.90	16.42	16.95	17.51	17.90	18.55	19.22	19.92	20.65
Return on Equity	Rs Lakh	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
Total Fixed Cost	Rs Lakh	135.88	136.37	137.03	137.86	138.88	126.29	130.56	135.05	139.76	144.71
Tariff	Rs/kWh	4.46	4.48	4.50	4.53	4.56	4.15	4.29	4.43	4.59	4.75

O & M expenses	Rs/kWh	1.75	1.85	1.94	2.04	2.15	2.26	2.38	2.51	2.64	2.78
Depreciation	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.37	0.37	0.37	0.37	0.37
Interest on term loan	Rs/kWh	0.41	0.32	0.23	0.14	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.51	0.52	0.54	0.56	0.58	0.59	0.61	0.63	0.65	0.68
Return on Equity	Rs/kWh	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Tariff	**Rs/kWh**	**4.46**	**4.48**	**4.50**	**4.53**	**4.56**	**4.15**	**4.29**	**4.43**	**4.59**	**4.75**
Variable CoG	Rs/kWh	7.15	7.40	7.66	7.92	8.19	8.48	8.77	9.07	9.38	9.71
Discount Factor		0.419	0.384	0.352	0.323	0.296	0.272	0.249	0.228	0.209	0.192
Levellised Tariff	Rs/kWh										

Determination of tariff for Co-Genera

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	89.09	93.77	98.69	103.87	109.32
Depreciation	Rs Lakh	11.21	11.21	11.21	11.21	11.21
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	21.53	22.32	23.14	23.99	24.88
Return on Equity	Rs Lakh	36.28	36.28	36.28	36.28	36.28
Total Fixed Cost	Rs Lakh	158.12	163.58	169.32	175.36	181.69
Tariff	Rs/kWh	5.19	5.37	5.56	5.76	5.97

O & M expenses	Rs/kWh	2.92	3.08	3.24	3.41	3.59
Depreciation	Rs/kWh	0.37	0.37	0.37	0.37	0.37
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.71	0.73	0.76	0.79	0.82
Return on Equity	Rs/kWh	1.19	1.19	1.19	1.19	1.19
Tariff	**Rs/kWh**	**5.19**	**5.37**	**5.56**	**5.76**	**5.97**
Variable CoG	Rs/kWh	10.04	10.39	10.75	11.12	11.50
Discount Factor		0.176	0.161	0.148	0.135	0.124
Levellised Tariff	Rs/kWh					

Parameters for determination of tariff for Solar PV Power plant upto 2 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	21%
			Auxiliary consumption	%	0.25%
			Useful Life	Years	25
			Gross Generation	MU	1.84
			Auxiliary consumption	MU	0.0046
			Net generation	MU	1.84
2	Project cost	Capital cost/MW		Rs Cr/MW	3.50
		Power Plant Cost		Rs. Cr	3.50
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	2.45
			Total equity amount	Rs Cr.	1.05
		Debt component	Loan amount	Rs Cr	2.45
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	1.05
			ROE for first 20 years	%	16.73%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.08%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.09
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%

Determination of tariff for Solar PV Power Plant up to 2 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	9.75	10.26	10.80	11.36	11.96	12.59	13.25	13.94	14.68	15.45
Depreciation	Rs Lakh	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35
Interest on term loan	Rs Lakh	25.38	23.63	21.88	20.13	18.37	16.62	14.87	13.12	11.37	9.62
Interest on Working Capital	Rs Lakh	1.31	1.31	1.30	1.30	1.30	1.30	1.30	1.31	1.31	1.32
Return on Equity	Rs Lakh	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56
Total Fixed Cost	Rs Lakh	70.35	69.10	67.89	66.70	65.54	64.42	63.33	62.28	61.27	60.29
Tariff	Rs/kWh	3.83	3.77	3.70	3.63	3.57	3.51	3.45	3.39	3.34	3.29

O & M expenses	Rs/kWh	0.53	0.56	0.59	0.62	0.65	0.69	0.72	0.76	0.80	0.84
Depreciation	Rs/kWh	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Interest on term loan	Rs/kWh	1.38	1.29	1.19	1.10	1.00	0.91	0.81	0.71	0.62	0.52
Interest on Working Capital	Rs/kWh	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Return on Equity	Rs/kWh	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Tariff	**Rs/kWh**	**3.83**	**3.77**	**3.70**	**3.63**	**3.57**	**3.51**	**3.45**	**3.39**	**3.34**	**3.29**
Discount Factor		1	0.917	0.840	0.770	0.706	0.648	0.594	0.544	0.499	0.457
Levellised Tariff	Rs/kWh	**3.40**									

Determination of tariff for Solar PV P

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	16.26	17.11	18.01	18.95	19.95	21.00	22.10	23.26	24.48	25.77
Depreciation	Rs Lakh	16.35	16.35	16.35	16.35	16.35	6.98	6.98	6.98	6.98	6.98
Interest on term loan	Rs Lakh	7.86	6.11	4.36	2.61	0.86	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.33	1.34	1.35	1.37	1.38	1.28	1.32	1.38	1.43	1.48
Return on Equity	Rs Lakh	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56	17.56
Total Fixed Cost	Rs Lakh	59.36	58.47	57.63	56.84	56.10	46.82	47.97	49.18	50.46	51.80
Tariff	Rs/kWh	3.23	3.19	3.14	3.10	3.06	2.55	2.61	2.68	2.75	2.82

O & M expenses	Rs/kWh	0.89	0.93	0.98	1.03	1.09	1.14	1.20	1.27	1.33	1.40
Depreciation	Rs/kWh	0.89	0.89	0.89	0.89	0.89	0.38	0.38	0.38	0.38	0.38
Interest on term loan	Rs/kWh	0.43	0.33	0.24	0.14	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.08	0.08
Return on Equity	Rs/kWh	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Tariff	**Rs/kWh**	**3.23**	**3.19**	**3.14**	**3.10**	**3.06**	**2.55**	**2.61**	**2.68**	**2.75**	**2.82**
Discount Factor		0.419	0.384	0.352	0.323	0.296	0.272	0.249	0.228	0.209	0.192
Levellised Tariff	Rs/kWh										

Determination of tariff for Solar PV P

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	1.84	1.84	1.84	1.84	1.84
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	27.12	28.54	30.04	31.62	33.28
Depreciation	Rs Lakh	6.98	6.98	6.98	6.98	6.98
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.62	1.68	1.74	1.81	1.88
Return on Equity	Rs Lakh	22.60	22.60	22.60	22.60	22.60
Total Fixed Cost	Rs Lakh	58.32	59.80	61.36	63.01	64.74
Tariff	Rs/kWh	3.18	3.26	3.34	3.43	3.53

O & M expenses	Rs/kWh	1.48	1.56	1.64	1.72	1.81
Depreciation	Rs/kWh	0.38	0.38	0.38	0.38	0.38
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.09	0.09	0.10	0.10	0.10
Return on Equity	Rs/kWh	1.23	1.23	1.23	1.23	1.23
Tariff	**Rs/kWh**	**3.18**	**3.26**	**3.34**	**3.43**	**3.53**
Discount Factor		0.176	0.161	0.148	0.135	0.124
Levellised Tariff	Rs/kWh					

Bhutori

Parameters for determination of tariff for Biogas based power plant					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	90%
			Auxiliary consumption	%	12.0%
			Useful Life	Years	25
			Gross Generation	MU	7.88
			Auxiliary consumption	MU	0.95
			Net generation	MU	6.94
2	Project cost	Capital cost/MW		Rs Cr/MW	13.540
		Power Plant Cost		Rs. Cr	13.54
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	9.478
			Total equity amount	Rs Cr.	4.062
		Debt component	Loan amount	Rs Cr	9.478
			Repayment Period	Year	15
			Interest rate	%	10.72%
		Equity Component	Equity Amount	Rs Cr	4.062
			ROE for first 20 years	%	16.73%
			ROE for 21 year onwards	%	21.52%
			Discount Rate	%	9.08%
		Fiscal assumptions	Income Tax	%	34.94%
			MAT Rate	%	16.31%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.76
			Escalation factor	%	5.25%
5	Working Capital	For fixed charges	Fuel cost	Month	1
			O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	11.97%
6	Fuel related assumptions		Specific Fuel Consumption	kg/kWh	3
			Base price of feedstock	Rs/MT	1821.755
			Fuel price escalation factor	%	3.45%

Determination of tariff for Biogas based power plant

Particulars	Year	1	2	3	4	5	6	7	8	9	10
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10
O & M expenses	Rs Lakh	80.03	84.23	88.66	93.31	98.21	103.37	108.79	114.50	120.51	126.84
Depreciation	Rs Lakh	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23	63.23
Interest on term loan	Rs Lakh	98.18	91.41	84.63	77.86	71.08	64.30	57.53	50.75	43.97	37.20
Interest on Working Capital	Rs Lakh	30.80	31.70	32.65	33.63	34.65	35.72	36.83	37.98	39.19	40.44
Return on Equity	Rs Lakh	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95
Total Fixed Cost	Rs Lakh	340.19	338.53	337.11	335.97	335.12	334.57	334.33	334.42	334.86	335.66
Tariff	Rs/kWh	4.90	4.88	4.86	4.84	4.83	4.82	4.82	4.82	4.83	4.84

O & M expenses	Rs/kWh	1.15	1.21	1.28	1.34	1.42	1.49	1.57	1.65	1.74	1.83
Depreciation	Rs/kWh	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Interest on term loan	Rs/kWh	1.42	1.32	1.22	1.12	1.02	0.93	0.83	0.73	0.63	0.54
Interest on Working Capital	Rs/kWh	0.44	0.46	0.47	0.48	0.50	0.51	0.53	0.55	0.56	0.58
Return on Equity	Rs/kWh	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Tariff	**Rs/kWh**	**4.90**	**4.88**	**4.86**	**4.84**	**4.83**	**4.82**	**4.82**	**4.82**	**4.83**	**4.84**
Variable CoG	Rs/kWh	6.21	6.42	6.65	6.88	7.11	7.36	7.61	7.87	8.15	8.43
Discount Factor		1	0.917	0.840	0.770	0.706	0.648	0.594	0.544	0.499	0.457
Levellised Tariff	Rs/kWh	**4.95**									

Pritora

Determination of tariff for Biogas bas

Particulars	Year	11	12	13	14	15	16	17	18	19	20
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	11	12	13	14	15	16	17	18	19	20
O & M expenses	Rs Lakh	133.50	140.51	147.89	155.65	163.82	172.42	181.48	191.00	201.03	211.58
Depreciation	Rs Lakh	63.23	63.23	63.23	63.23	63.23	27.01	27.01	27.01	27.01	27.01
Interest on term loan	Rs Lakh	30.42	23.64	16.87	10.09	3.32	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	41.75	43.11	44.52	46.00	47.53	48.64	50.40	52.23	54.13	56.11
Return on Equity	Rs Lakh	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95	67.95
Total Fixed Cost	Rs Lakh	336.85	338.44	340.46	342.92	345.85	316.02	326.84	338.20	350.12	362.65
Tariff	Rs/kWh	4.86	4.88	4.91	4.94	4.98	4.55	4.71	4.87	5.05	5.23

O & M expenses	Rs/kWh	1.92	2.03	2.13	2.24	2.36	2.49	2.62	2.75	2.90	3.05
Depreciation	Rs/kWh	0.91	0.91	0.91	0.91	0.91	0.39	0.39	0.39	0.39	0.39
Interest on term loan	Rs/kWh	0.44	0.34	0.24	0.15	0.05	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.60	0.62	0.64	0.66	0.69	0.70	0.73	0.75	0.78	0.81
Return on Equity	Rs/kWh	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Tariff	**Rs/kWh**	**4.86**	**4.88**	**4.91**	**4.94**	**4.98**	**4.55**	**4.71**	**4.87**	**5.05**	**5.23**
Variable CoG	Rs/kWh	8.72	9.02	9.33	9.65	9.99	10.33	10.69	11.05	11.44	11.83
Discount Factor		0.419	0.384	0.352	0.323	0.296	0.272	0.249	0.228	0.209	0.192
Levellised Tariff	Rs/kWh										

TBhutia

Determination of tariff for Biogas bas

Particulars	Year	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94
Fixed Cost	Year	21	22	23	24	25
O & M expenses	Rs Lakh	222.69	234.38	246.69	259.64	273.27
Depreciation	Rs Lakh	27.01	27.01	27.01	27.01	27.01
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	58.45	60.58	62.80	65.10	67.49
Return on Equity	Rs Lakh	87.41	87.41	87.41	87.41	87.41
Total Fixed Cost	Rs Lakh	395.57	409.39	423.91	439.16	455.18
Tariff	Rs/kWh	5.70	5.90	6.11	6.33	6.56

O & M expenses	Rs/kWh	3.21	3.38	3.56	3.74	3.94
Depreciation	Rs/kWh	0.39	0.39	0.39	0.39	0.39
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.84	0.87	0.91	0.94	0.97
Return on Equity	Rs/kWh	1.26	1.26	1.26	1.26	1.26
Tariff	**Rs/kWh**	**5.70**	**5.90**	**6.11**	**6.33**	**6.56**
Variable CoG	Rs/kWh	12.24	12.66	13.10	13.55	14.02
Discount Factor		0.176	0.161	0.148	0.135	0.124
Levellised Tariff	Rs/kWh					

Bhutia.